SOUTH DAKOTA			
Aberdeen	45°27'21"	98°25'26"	. 6
Rapid City	44°02'36"	103°03'36"	5
TENNESSEE			
Elizabethton	36°26'04"	82°08'06"	7
Memphis	35°01'44"	89°56'15"	10
Nashville	36°08'44"	86°41'31"	3
TEXAS			
Austin	30°16'37"	97°49'34"	2
Bedford	32°50'19"	97°08'03"	1
Houston .	29°54'37"	95°24'39"	9
Lubback	33°37'06"	101°52'14"	7
Monahans	31°34'58"	102°54'18"	6
UTAH			
Abajo Peak	37°50'21"	109°27'42"	7
Delta	39°23'15"	112°30'44"	2
Escalante	37°45'19"	111°52'27"	5
Green River	38°57'54"	110°13'40"	3
Salt Lake City	40°39'11"	112°12'06"	1
VIRGINIA			
Arlington	38°52'55"	77°06'18"	6
WASHINGTON			
Seattle	47°26'08"	122°17'35"	4
Cheney	47°33'14"	117°43'35"	1
WEST VIRGINIA			
Charleston	38°19'47"	81°39'36"	2
WISCONSIN			
Stevens Point	44°33'06"	8 9°25'27"	8
WYOMING			
Riverton	43°03'37"	108°27'23"	9

- (a) Carriers authorized to construct and operate air-ground radiotelephone systems on the channels listed in § 22.857 may also construct and operate low power ground stations designed to provide service to airborne mobile stations on the ground, provided that no interference is caused to service provided by ground stations located in accordance with the geographical channel block layout or with paragraph (b) of this section. The antenna location of each such low power ground station may be anywhere that is at least 483 kilometers (300 miles) from all antenna locations of ground stations using the same channel block(s) in accordance with the geographical channel block layout or with paragraph (b) of this section.
- (b) Ground station locations may be more than 1.6 kilometers (one mile) from all of the locations listed in this section, provided that they are at least 885 kilometers (550 miles) from all antenna locations of ground stations using the same channel block(s) in accordance with the geographical channel block layout or with this paragraph.

§ 22.861 Emission limitations.

Any appropriate emission type may be used to provide airground radiotelephone service on the channels listed in § 22.857, provided that the emission limitations of this section are met.

(a) Emission mask. The emission mask described in this

paragraph applies instead of those in § 22.359. The power of any emission in each of the adjacent channels must be at least 30 decibels below the power of the total emission. The power of any emission in any of the channels other than the one being used and the adjacent channels must be at least 50 decibels below the power of the total emission.

- (b) <u>Airborne mobile transmitters</u>. The power of any emission in each of the adjacent channels must not exceed -130 dBm at any ground station receiver, assuming a 0 dBi receive antenna. The power of any emission in any of the channels other than the one being used and the adjacent channels must not exceed -148 dBm at any ground station receiver, assuming a 0 dBi receive antenna.
- (c) Ground station transmitters. The effective radiated power (ERP) of any emission outside of the frequency ranges set forth in § 22.857 must not exceed -10 dBm. The ERP of any emission in each of the adjacent channels must not exceed +10 dBm. The ERP of any emission in any of the channels other than the one being used and the adjacent channels must not exceed -5 dBm.
- (d) If an emission on any frequency outside of the authorized bandwidth causes harmful interference, the Commission may require greater attenuation of that emission than required in paragraph (a) of this section.

§ 22.863 Transmitter frequency tolerance.

Ground station transmitter frequencies must be maintained within 10 parts per million (ppm) of the channel reference or center frequencies. Doppler shift correction must be used to ensure that the frequencies of the signals of airborne mobile stations received at ground stations remain within 10 ppm of the channel reference or center frequencies.

§ 22.865 Automatic channel selection procedures.

Operation of stations using the channels listed in § 22.857 must be in accordance with the procedures in this section.

- (a) A communications channel is not available for use by a ground station if it is already in use by another ground station at the same location. Ground station equipment must automatically determine whether channels are in use by other ground stations at the same location, and may employ radio frequency signal monitoring to do so. For example, a communications channel may be determined to be in use if the received signal power on that channel at the ground station exceeds -115 dBm, which, assuming a 0 dB gain 895 MHz receive antenna, corresponds to a field strength of approximately 19 dBµV/m. Ground stations may employ an alternative method of determining whether a communications channel is in use provided that such procedure is at least as reliable as radio frequency signal monitoring.
- (b) Data indicating which communications channels are available for use are transmitted by ground stations on the assigned control channels.
- (c) A call is originated when an airborne mobile station selects a communications channel based on the received data from ground stations and other factors, and transmits an identification code (which identifies the specific ground station from which service is requested) on the selected communications channel. The ground station from which service has been requested may then obtain any necessary billing information and complete the call.

Table G-1 - Ground Station Channels										
CHANNEL BLOCK										
	10	9	8	7	6	5	4	3	2	1
C-1	849.0055	849.2055	849.4055	849.6055	849.8055	850.0055	850.2055	850.4055	850.6055	850.8055
C-2	849.0115	849.2115	849.4115	849.6115	849.8115	850.0115	850.2115	850.4115	850.6115	850.8115
C-3	849.0175	849.2175	849.4175	849.6175	849.8175	850.0175	850.2175	850.4175	850.6175	850.8175
C-4	849.0235	849.2235	849.4235	849.6235	849.8235	850.0235	850.2235	850.4235	850.6235	850.8235
C-5	849.0295	849.2295	849.4295	849.6295	849.8295	850.0295	850.2295	850.4295	850.6295	850.8295
C-6	849.0355	849.2355	849.4355	849.6355	849.8355	850.0355	850.2355	850.4355	850.6355	850.8355
C-7	849.0415	849.2415	849.4415	849.6415	849.8415	850.0415	850.2415	850.4415	850.6415	850.8415
C-8	849.0475	849.2475	849.4475	849.6475	849.8475	850.0475	850.2475	850.4475	850.6475	850.8475
C-9	849.0535	849.2535	849.4535	849.6535	849.8535	850.0535	850.2535	850.4535	850.6535	850.8535
C-10	849.0595	849.2595	849.4595	849.6595	849.8595	850.0595	850.2595	850.4595	850.6595	850.8595
C-11	849.0655	849.2655	849.4655	849.6655	849.8655	850.0655	850.2655	850.4655	850.6655	850.8655
C-12		849.2715	849.4715	849.6715	849.8715	850.0715	850.2715	850.4715	850.6715	850.8715
C-13		849.2775	849.4775	849.6775	849.8775	850.0775	850.2775	850.4775	850.6775	850.8775
C-14		849.2835	849.4835	849.6835	849.8835	850.0835	850.2835	850.4835	850.6835	850.8835
C-15	849.0895	849.2895	849.4895	849.6895	849.8895	850.0895	850.2895	850.4895	850.6895	850.8895
								050 4055	0=0 00=0	050 0055
C-16		849.2955	849.4955	849.6955	849.8955	859.0955	850.2955	850.4955	850.6955	850.8955
C-17	849.1015	849.3015	849.5015	849.7015	849.9015	850.1015	850.3015	850.5015	850.7015	850.9015
C-18	849.1075	849.3075	849.5075	849.7075	849.9075	850.1075	850.3075	850.5075	850.7075	850.9075 850.0135
C-19	849.1135	849.3135	849.5135	849.7135	849.9135	850.1135	850.3135	850.5135	850.7135	850.9135
C-20	849.1195	849.3195	849.5195	849.7195	849.9195	850.1195	850.3195	850.5195	850.7195	850.9195
C-21	849.1255	849.3255	849.5255	849.7255	849.9255	850.1255	850.3255	850.5255	850.7255	850.9255
C-22	849.1315	849.3315	849.5315	849.7315	849.9315	850.1315	850.3315	850.5315	850.7315	850.9315
C-23	849.1375	849.3375	849.5375	849.7375	849.9375	850.1375	850.3375	850.5375	850.7375	850.9375
C-24	849.1435	849.3435	849.5435	849.7435	849.9435	850.1435	850.3435	850.5435	850.7435	850.9435
C-25	849.1495	849.3495	849.5495	849.7495	849.9495	850.1495	850.3495	850.5495	850.7495	850.9495
C-26	849.1555	849.3555	849.5555	849.7555	849.9555	850.1555	850.3555	850.5555	850.7555	850.9555
C-27	849.1615	849.3615	849.5615	849.7615	849.9615	850.1615	850.3615	850.5615	850.7615	850.9615
C-28	849.1675	849.3675	849.5675	849.7675	849.9675	850.1675	850.3675	850.5675	850.7675	850.9675
C-29	849.1735	849.3735	849.5735	849.7735	849.9735	850.1735	850.3735	850.5735	850.7735	850.9735
P-6	849.1813	849.3813	849.5813	849.7813	849.9813	850.1813	850.3813	850.5813	850.7813	850.9813
P-5	849.1845	849.3845	849.5845	849.7845	849.9845	850.1845	850.3845	850.5845	850.7845	850.9845
P-4	849.1877	849.3877	849.5877	849.7877	849.9877	850.1877	850.3877	850.5877	850.7877	850.9877
P-3	849.1909	849.3909	849.5909	849.7909	849.9909	850.1909	850.3909	850.5909	850.7909	850.9909
P-2	849.1941	849.3941	849.5941	849.7941	849.9941	850.1941	850.3941	850.5941	850.7941	850.9941
P-1	849.1973	849.3973	849.5973	849.7973	849.9973	850.1973	850.3973	850.5973	850.7973	850.9973

Table G-2 - Airborne Mobile Station Channels										
					CHANNE	L BLOCK				
	10	9	8	7	6	5	4	3	2	1
C-1	894.0055	894.2055	894.4055	894.6055	894.8055	895.0055	895.2055	895.4055	895.6055	895.8055
C-2	894.0115	894.2115	894.4115	894.6115	894.8115	895.0115	895.2115	895.4115	895.6115	895.8115
C-3	894.0175	894.2175	894.4175	894.6175	894.8175	895.0175	895.2175	895.4175	895.6175	895.8175
C-4	894.0235	894.2235	894.4235	894.6235	894.8235	895.0235	895.2235	895.4235	895.6235	895.8235
C-5	894.0295	894.2295	894.4295	894.6295	894.8295	895.0295	895.2295	895.4295	895.6295	895.8295
							•			
C-6	894.0355	894.2355	894.4355	894.6355	894.8355	895.0355	895.2355	895.4355	895.6355	895.8355
C-7	894.0415	894.2415	894.4415	894.6415	894.8415	895.0415	895.2415	895.4415	895.6415	895.8415
C-8 C-9	894.0475	894.2475	894.4475	894.6475	894.8475	895.0475	895.2475	895.4475	895.6475	895.8475
C-10	894.0535 894.0595	894.2535 894.2595	894.4535 894.4595	894.6535 894.6595	894.8535 894.8595	895.0535 895.0595	895.2535 895.2595	895.4535 895.4595	895.6535 895.6595	895.8535 895.8595
0-10	064.0030	054.2050	034.4030	654.0050	034.0035	090.0090	050.2050	030.4030	030.0030	090.0090
C-11	894.0655	894.2655	894.4655	894.6655	894.8655	895.0655	895.2655	895.4655	895.6655	895.8655
C-12	894.0715	894.2715	894,4715	894.6715	894.8715	895.0715	895.2715	895,4715	895.6715	895.8715
C-13	894.0775	894.2775	894.4775	894.6775	894.8775	895.0775	895.2775	895.4775	895.6775	895.8775
C-14	894.0835	894.2835	894.4835	894.6835	894.8835	895.0835	895.2835	895.4835	895.6835	895.8835
C-15	894.0895	894.2895	894.4895	894.6895	894.8895	895.0895	895.2895	895.4895	895.6895	895.8895
C-16	894.0955	894.2955	894.4955	894.6955	894.8955	895.0955	895.2955	895.4955	895.6955	895.8955
C-17	894.1015	894.3015	894.5015	894.7015	894.9015	895.1015	895.3015	895.5015	895.7015	895.9015
C-18	894.1075	894.3075	894.5075	894.7075	894.9075	895.1075	895.3075	895.5075	895.7075	895.9075
C-19	894.1135	894.3135	894.5135	894.7135	894.9135	895.1135	895.3135	895.5135	895.7135	895.9135
C-20	894.1195	894.3195	894.5195	894.7195	894.9195	895.1195	895 .3195	895.5195	895.7195	895.9195
C-21	894.1255	894.3255	894.5255	894.7255	894.9255	895.1255	895.3255	895.5255	895.7255	895.9255
C-22	894.1315	894.3315	894.5315	894.7315	894.9315	895.1315	895.3315	895.5315	895.7315	895.9315
C-23	894.1375	894.3375	894.5375	894.7375	894.9375	895.1375	895.3375	895.5375	895.7375	895.9375
C-24	894.1435	894.3435	894.5435	894.7435	894.9435	895.1435	895.3435	895.5435 805.5405	895.7435	895.9435
C-25	894.1495	894.3495	894.5495	894.7495	894.9495	895.1495	895.3495	895.5495	895.7495	895.9495
C-26	894.1555	894.3555	894.5555	894.7555	894.9555	895.1555	895.3555	895.5555	895.7555	895.9555
C-27	894.1615	894.3615	894.5615	894.7615	894.9615	895.1615	895.3615	895.5615	895.7615	895.9615
C-28	894.1675	894.3675	894.5675	894.7675	894.9675	895.1675	895.3675	895.5675	895.7675	895.9675
C-29	894.1735	894.3735	894.5735	894.7735	894.9735	895.1735	895.3735	895.5735	895.7735	895.9735
P-6	894 .1813	894.3813	894.5813	894.7813	894.9813	895.1813	895.3813	895.5813	895.7813	895.9813
P-5	894.1845	894.3845	894.5845	894.7845	894.9845	895.1845	895.3845	895.5845	895.7845	895.9845
P-4	894.1877	894.3877	894.5877	894.7877	894.9877	895.1877	895.3877	895.5877	895.7877	895.9877
P-3	894.1909	894.3909	894.5909	894.7909	894.9909	895.1909	895.3909	895.5909	895.7909	895.9909
P-2	894.1941	894.3941	894.5941	894.7941	894.9941	895.1941	895.3941	895.5941	895.7941	895.9941
P-1	894.1973	894.3973	894.5973	894.7973	894.9973	895.1973	895.3973	895.5973	895.7973	895.9973

- (d) A ground station may not transmit on a communications channel unless it has received the proper identification code. After a ground station has begun to transmit on a communications channel, that channel is not available to ground stations other than the one from which service has been requested until the call is terminated.
- (e) A call is terminated by the ground station when either a hang-up signal is transmitted by the airborne mobile station, or the signal from the airborne mobile station on the communications channel is lost for a period of 15 continuous seconds. The hang-up signal is the on-off keying (50% duty cycle) of an unmodulated carrier over a period of one second with pulse duration of 5 milliseconds. However, if all carriers authorized to operate airground systems using the channels listed in § 22.857 agree that an alternative hang-up signal and/or procedure would be more efficient or beneficial, such alternative hang-up signal and/or procedure may be used. The carriers must jointly give prior notification to the Commission if an alternative hang-up signal and/or procedure is used.

§ 22.867 Effective radiated power limits.

The effective radiated power (ERP) of ground and airborne stations operating on the channels listed in § 22.857 must not exceed the limits in this section.

- (a) The ERP of airborne mobile station transmitters must not exceed 30 watts.
- (b) The ERP of ground station transmitters must not exceed 100 watts.
- (c) The ERP of low power ground station transmitters operating pursuant to paragraph (a) of § 22.859 must not exceed 1 watt.

§ 22.869 Assignment of control channels.

The Commission will select and assign exclusively one control channel to each air-ground licensee after receiving written notification that the licensee's system will begin providing service within two months.

§ 22.871 Control channel transition period.

The rules in this section provide for a period of transition during which the experimental air-ground system operating on the channels listed in § 22.857 will be discontinued and replaced by a system operating in full compliance with the rules in this subpart.

- (a) The experimental system may continue to exclusively use the lower 20 kHz of each channel block (including communications channels C-1, C-2 and C-3) for control channels until July 9, 1993. After that date, communications channels C-1 and C-3 will be available for use by all carriers authorized to operate an air-ground system on the channels listed in § 22.857.
- (b) The experimental system may continue to exclusively use a 3.2 kHz control channel contained within the bandwidth of communications channel C-2 of each channel block until September 9, 1996. After that date communications channel C-2 will be available for use by all carriers authorized to operate an air-ground system on the channels listed in § 22.857.

§ 22.873 Construction period for commercial aviation air-ground systems.

Construction of a new commercial aviation air-ground system is considered to be completed for the purpose of this section and § 22.142 when the number of ground stations specified in this section are constructed and operational.

- (a) At least 25 ground stations must be constructed and operational within 3 years. Licensees must notify the Commission (FCC Form 489) as soon as this requirement is met. Service to the public may commence as soon as the notification is mailed. If service to the public is not commenced at that time, the notification must contain a statement to this effect.
- (b) At least 50 ground stations must be constructed and operational within 5 years. Nationwide service to the public must commence within 5 years. Licensees must notify the Commission (FCC Form 489) as soon as these requirements are met.

§ 22.875 Commercial aviation air-ground system application requirements.

Existing and prospective common carriers may file applications for authority to construct and operate a new nationwide air-ground system on the channels listed in § 22.857 only during window filing periods that may be announced by the Commission in Public Notices. In addition to the requirements elsewhere in this part, such applications must contain the following exhibits:

- (a) Written Agreement. A signed agreement between the applicant and at least one airline or airline organization, authorizing the applicant to provide air-ground service on its aircraft.
- (b) <u>Financial Qualifications</u>. At the time of filing its application an applicant must demonstrate that it has either a firm financial commitment or available financial resources necessary to construct 50 ground stations and operate for one year after initiation of nationwide air-ground service its proposed air-ground system.
- (1) The demonstration of commitment must include and be sufficient to cover the realistic and prudent estimated costs of construction of 50 ground stations, operation and other initial expenses for one year after initiation of nationwide air-ground service. The estimated costs, operation costs and other initial expenses must be itemized. The estimated costs must include the anticipated costs of construction of each ground station.
- (2) The firm financial commitment required above must be obtained from a state or federally chartered bank or savings and loan association, or the financial affiliate or subsidiary of an equipment supplier, and must contain a statement that the lender:
- (i) has examined the financial condition of the applicant including audited financial statements, and has determined that the applicant is creditworthy;
- (ii) that the lender is committed to providing a sum certain to the particular applicant;
- (iii) that the lender's willingness to enter into the commitment is based solely on its relationship with the applicant; and
- (iv) that the commitment is not in any way guaranteed by any entity other than the applicant.

- (3) Applicants intending to rely on personal or internal resources must submit:
- (i) audited financial statements certified within one year of the date of the application, indicating the availability of sufficient net liquid assets to construct and operate the proposed air-ground system for one year.
 - (A) The auditors must be certified public accountants.
- (B) Net liquid assets is considered to be the excess of current assets (readily converted to cash) over current liabilities. In order to demonstrate ready convertibility into cash, the identity, liquidity and value of listed assets must be demonstrated. Non-liquid assets can be relied on if the marketability of those assets is documented.
- (ii) an audited balance sheet, current within 60 days of filing, which clearly shows the continued availability of sufficient net liquid assets to construct and operate the proposed air-ground system for one year after nationwide service begins.
 - (c) Service Plan. A service plan containing:
- (1) a map or other description of the planned geographic coverage area, including air space over the continental United States, Alaska, Hawaii and other United States territories.
- (2) a schedule for construction of 50 ground stations and provision of nationwide service to the public within 5 years from the grant of the initial authorization.
- (3) a description of how the system will interconnect with the landline telephone network and be integrated with other air-ground systems, including a statement as to whether the system will be interconnected with international air-ground systems.
- (4) a projection of the system capacity, in terms of the maximum number of calls per hour in each area.
- (d) <u>Technical Exhibit</u>. A technical description of the proposed system demonstrating compliance with all applicable technical requirements and describing how the proposed system would operate, if authorized. This exhibit must provide the following information:
- (1) the number of ground stations to be used, their locations, and the type and quantity of equipment proposed for the system;
- (2) a complete description of the procedures and data protocols to be used on the control channel;
- (3) the modulation types to be used and their spectral characteristics:
- (4) the effective radiated power and transmitter peak envelope power for all transmitters at each ground station location, and the effective radiated power of the airborne mobile stations;
 - (5) antenna information as follows:
 - (i) for airborne mobile stations, the antenna type(s) to be used;
- (ii) for ground stations, vertical and horizontal radiation patterns, antenna heights above ground level, antenna support structure heights above ground level, ground elevation above mean sea level

and any relevant information (e.g. FAA approval) that may be helpful in determining whether ground station antennas require marking and lighting;

- (6) analytical data, including calculations, of potential interference within and without the spectrum for the air-ground system;
- (7) a statement in compliance with the National Environmental Policy Act of 1969. See § 1.1301 et. seq.

Subpart H - Cellular Radiotelephone Service

§ 22.900 Scope.

The rules in this subpart govern the licensing and operation of cellular radiotelephone systems. Licensing and operation of these systems are also subject to rules elsewhere in this part that apply generally to the Public Mobile Services. However, in case of conflict, the rules in this subpart govern.

§ 22.901 Cellular service requirements and limitations.

Cellular system licensees must provide cellular mobile radiotelephone service upon request to all cellular subscribers in good
standing, including roamers (subscribers to cellular systems other
than the one from which they are requesting service), while such
subscribers are located within the authorized cellular geographic
service area (see § 22.911). However, a cellular system licensee
may refuse or terminate service, subject to any applicable state or
local requirements for timely notification, to any subscriber who
operates a cellular telephone in an airborne aircraft in violation of
§ 22.925 or otherwise fails to cooperate with the licensee in exercising control over mobile stations pursuant to the licensee's responsibility under § 22.927.

- (a) <u>Service area information</u>. Licensees must inform prospective subscribers of the area in which reliable service can be expected.
- (b) <u>Lack of capacity</u>. If a licensee refuses a request for cellular service because of a lack of system capacity, it must report that fact to the Commission in writing, explaining how it plans to increase capacity.
- (c) <u>Dispatch service</u>. Cellular systems must not offer or provide dispatch service.
- (d) Atternative technologies and auxiliary services. Licensees of cellular systems may use alternative cellular technologies and/or provide auxiliary common carrier services on the communication channels in their assigned channel block, provided that cellular service is available to subscribers whose mobile equipment conforms to the cellular system compatibility specification (see § 22.933).
- (1) Notification. Cellular licensees must notify the Commission (FCC Form 489) at least thirty days prior to implementation of alternative technology or auxiliary services. Such notifications must include an exhibit describing the alternative technology to be used and/or auxiliary service to be offered, and a list of any new or modified transmitting facilities. Licensees must perform or obtain an engineering analysis to ensure that interference to the service of other cellular systems will not result from the implementation of auxiliary services or alternative cellular technologies.
 - (2) Exemptions. Alternative technology and auxiliary service

operations are exempt from the channeling requirements of § 22.905, the modulation requirements of § 22.915 and the emission limitations of § 22.917, except for emission limitations that apply to emissions outside the assigned channel block.

§ 22.903 Conditions applicable to former Bell operating companies.

Ameritech Information Technologies Corporation, Bell Atlantic Corporation, BellSouth Corporation, NYNEX Corporation, Pacific Telesis Group, Southwestern Bell Corporation, U.S. West, Inc., their successors in interest and affiliated entities (former BOCs) may engage in the provision of cellular service only in accordance with the conditions in this section, unless otherwise authorized by the Commission. Former BOCs may, subject to other provisions of law, have a controlling or lesser interest in or be under common control with separate corporations that provide cellular service only under the following conditions:

- (a) Access to landline facilities. Former BOCs must not sell, lease or otherwise make available to the separate corporation any transmission facilities which are used in any way for the provision of its landline telephone services, except on a compensatory, arm's-length basis. Separate corporations must not own any facilities for the provision of landline telephone service. Access to landline exchange and transmission facilities for the provision of cellular service must be obtained by separate corporations on the same terms and conditions as those facilities are made available to other entities.
- (b) <u>Independence</u>. Separate corporations must operate independently in the provision of cellular service. Each separate corporation must -
 - (1) maintain its own books of account;
 - (2) have separate officers;
- (3) employ separate operating, marketing, installation and maintenance personnel; and,
- (4) utilize separate computer and transmission facilities in the provision of cellular services.
- (c) Research or development. Any research or development performed by former BOCs for separate corporations, either separately or jointly, must be on a compensatory basis.
- (d) <u>Transactions</u>. All transactions between the separate corporation and the former BOC or its affiliates which involve the transfer, either direct or by accounting or other record entries, of money, personnel, resources, other assets or any things of value, shall be reduced to writing. A copy of any contract, agreement or other arrangement entered between such entities with regard to interconnection with landline network exchange and transmission facilities must be filed with the Commission within thirty days after the contract, agreement, or other arrangement is made. A copy of all other contracts, agreements or arrangements between such entities shall be kept available by the separate corporation for inspection upon reasonable request by the Commission. The provision shall not apply to any transaction governed by the provision of an effective state or federal tariff.
- (e) <u>Promotion</u>. Former BOCs must not engage in the sale or promotion of cellular service on behalf of the separate corporation. However, this does not prohibit joint advertising or promotional

efforts by the landline carrier and its cellular affiliate.

- (f) <u>Proprietary information</u>. Former BOCs must not provide to any such separate corporation any customer proprietary information, unless such information is publicly available on the same terms and conditions.
- (g) <u>Provision of other Public Mobile services</u>. Separate corporations may include, as part of their operations, the provision of other Public Mobile services.

§ 22.905 Channels for cellular service.

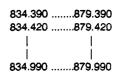
The following channels are allocated for block assignment in the Cellular Radiotelephone Service. All channels have a bandwidth of 40 kHz and are designated by their center frequencies in MegaHertz.

CHANNEL BLOCK A

416 communication channel pairs

base	mobile	base	mobile
869.040	824.040	890.010	845.010
869.070	824.070	890.040	845.040
1		1	-
1	1	ĺ	. 1
879.990	834.990	891.480	846.480

21 control channel pairs



CHANNEL BLOCK B

416 communication channel pairs

base	mobile	base	mobile
	835.020 835.050		846.510 846.540
889.980 .	844.980	893.970	848.970

835.020880.020 835.050880.050

21 control channel pairs

835.620880.620

- (a) Each channel block is assigned exclusively to one licensee for use in that licensee's cellular geographic service area (see § 22.911).
- (b) Licensees may use any channel pair from the assigned channel block at any of their authorized transmitter locations, subject to the prior coordination requirements of § 22.907.

(c) In the event harmful interference occurs between two or more cellular systems and such interference cannot be resolved between the licensees thereof, the Commission may require the licensees to make such changes as it deems necessary to avoid such interference.

§ 22.907 Coordination of channel usage.

Licensees in the Cellular Radiotelephone Service must coordinate, with the appropriate parties, channel usage at each transmitter location within 121 kilometers (75 miles) of any transmitter locations authorized to other licensees or proposed by tentative selectees and other applicants with non-mutually exclusive applications.

- (a) Licensees must cooperate and make reasonable efforts to resolve technical problems that may inhibit effective and efficient use of the cellular radio spectrum; however, licensees are not obligated to suggest extensive changes to or redesign other licensees' cellular systems. Licensees must make reasonable efforts to avoid blocking the growth of other cellular systems that are likely to need additional capacity in the future.
- (b) If technical problems are addressed by an agreement or operating arrangement between the licensees that would require procedures to be taken to reduce the likelihood of intersystem interference or would result in a reduction of quality or capacity of either system, the licensees must notify the Commission.

§ 22.909 Cellular markets.

Cellular markets are standard geographic areas used by the Commission for administrative convenience in the licensing of cellular systems. Cellular markets comprise Metropolitan Statistical Areas (MSAs) and Rural Service Areas (RSAs).

- (a) <u>MSAs</u>. Metropolitan Statistical Areas are 306 areas, including New England County Metropolitan Areas and the Gulf of Mexico Service Area (water area of the Gulf of Mexico, border is the coastline), defined by the Office of Management and Budget, as modified by the Commission. MSAs are listed in Public Notices CL-69A and 92-40.
- (b) <u>FISAs</u>. Rural Service Areas are 428 areas, other than MSAs, established by the Commission. RSAs are listed in Public Notices CL-88-110 and 92-40.

\$ 22.911 Cellular geographic service area.

The Cellular Geographic Service Area (CGSA) of a cellular system is the geographic area considered by the Commission to be served by the cellular system. The CGSA is the area within which cellular systems are entitled to protection and within which adverse effects for the purpose of determining whether a petitioner has standing are recognized. Licensees of the first cellular system on each channel block in MSAs 1 through 90 must maintain a CGSA that covers 75% of the geographic area of the MSA. Licensees of the first cellular system on each channel block in MSAs 91 through 305 must maintain a CGSA that covers 75% of the geographic area or population of the MSA.

(a) <u>CGSA determination</u>. The CGSA is the composite of the service areas of all of the cells in the system, excluding any area outside the cellular market boundary, except as provided in paragraph (c) of this section, and excluding any area within the CGSA of another cellular system. The service area of a cell is the area within its service area boundary. The distance to the service area boundary is calculated as a function of effective radiated power (ERP) and antenna center of radiation height above average terrain (HAAT).

(1) Except as provided in paragraph (a)(2) of this section, the radial distance from a cell transmitting antenna to its service area boundary is calculated as follows:

$$d = 2.531 \times h^{0.34} \times p^{0.17}$$

where d is the radial distance in kilometers
h is the radial antenna HAAT in meters
p is the radial ERP in Watts

(2) The radial distance from a cell transmitting antenna in the Gulf of Mexico MSA to its service area boundary is calculated as follows:

$$d = 6.895 \times h^{0.30} \times p^{0.15}$$

where d is the radial distance in kilometers h is the radial antenna HAAT in meters p is the radial ERP in Watts

- (3) Whenever the actual HAAT is less than 30 meters (98 feet), 30 must be used as the value for h in the above formula.
- (4) The value used for p in the above formula must not be less than 27 dB less than the maximum ERP in any direction.
- (b) Alternative CGSA determination. If a carrier believes that the method prescribed in paragraph (a) of this section produces a CGSA that departs significantly from the geographical area where reliable cellular service is actually provided, the carrier may submit for the Commission's consideration a depiction of what the carrier believes the CGSA should be. Such submissions must be accompanied by one or more supporting propagation studies using methods appropriate for the 800-900 MHz frequency range, including all supporting data and calculations, and/or by extensive field strength measurement data. For the purpose of such submissions, cellular service is considered to be provided where the predicted or measured median field strength equals or exceeds 32 dBμV/m. If, after consideration of such submissions, the Commission finds that adjustment to a CGSA is warranted, the Commission may so order.
- (c) <u>CGSA extension areas</u>. Areas outside of the MSA or RSA boundary, but within the service area as calculated using the method of paragraph (a) of this section, are part of the CGSA only under the following circumstances:
- (1) During the five year fill-in period of the system in the MSA or RSA containing the extension, the licensees of systems on the same channel block in adjacent MSAs or RSAs may agree that the portion of the service area of one system that extends into unserved area in the other system's MSA or RSA is part of the CGSA of the former system.
- (2) At the end of the five year fill-in period of the system in the MSA or RSA containing the extension, the portion of the service area that extends into unserved area in another MSA or RSA becomes part of the CGSA, provided that the licensee of the system so extended files a system information update in accordance with § 22.947(c).

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- (3) For original systems in MSAs, extensions of the CGSA authorized by the Commission are part of the CGSA to the extent authorized.
- (d) <u>Unserved areas</u>. Unserved areas are areas outside of all existing CGSAs (on either of the channel blocks), to which the Communications Act of 1934, as amended, is applicable.

§ 22.912 Service area boundary extensions.

This section contains cellular system design requirements in regard to service area boundary extensions beyond cellular market boundaries.

- (a) <u>Contract extensions</u>. Licensees of the first authorized cellular systems on the same channel block in adjacent cellular markets may agree to allow service area boundary extensions into their markets during the five year fill-in period of the market into which the service area extends.
- (b) <u>Unserved area systems</u>. Cellular systems proposed for unserved areas must be designed such that the service area boundaries of the cells do not extend:
- into the CGSA of any other licensee's cellular system on the same channel block; or,
- (2) beyond the boundary of the cellular market, except that the Commission may authorize <u>de minimis</u> extensions of the service area boundaries beyond the cellular market boundary provided that:
 - (i) the system is designed to serve only areas within the CGSA;
- (ii) the extensions are unavoidable because of irregular terrain or unusual market boundaries; and,
- (iii) the extensions are into a market on a channel block for which the five year fill-in period has not elapsed.

§ 22.913 Effective radiated power limits.

The effective radiated power (ERP) of transmitters in the Cellular Radiotelephone Service must not exceed the limits in this section.

- (a) <u>Maximum ERP</u>. The effective radiated power (ERP) of base transmitters and cellular repeaters must not exceed 500 Watts. The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.
- (b) <u>Height-power limit</u>. The ERP of base transmitters must not exceed the amount that would result in an average distance to the service area boundary of 41.5 kilometers (26 miles). The average distance to the service area boundary is calculated by taking the arithmetic mean of the distances determined using the procedures specified in § 22.911 for the eight cardinal radial directions.

§ 22.915 Modulation requirements.

Cellular systems must be capable of providing service using the types of modulation described in the cellular system compatibility specification.

(a) Non-voice modulating signals. Modulating signals other than voice signals, such as data signals, may be transmitted, provided the resulting frequency modulated emission exhibits spectral characteristics not exceeding those resulting from voice modulation.

- (b) Modulation levels. The levels of the modulating signals must be set to the values specified in this paragraph, and must be maintained within ±10% of those values.
- (1) The instantaneous frequency deviation resulting from the main modulating signal must be ± 12 kHz.
- (2) The instantaneous frequency deviation resulting from the supervisory audio tones must be ± 2 kHz.
- (3) The instantaneous frequency deviation resulting from the signaling tone must be $\pm 8\ kHz.$
- (4) The instantaneous frequency deviation resulting from wideband data signals must be ±8 kHz.
- (c) <u>Deviation limitation circuitry</u>. Cellular transmitters must be equipped with circuitry that automatically prevents modulation levels for voice transmissions from exceeding the limits specified in this section.
- (d) <u>Audio filter characteristics</u>. Except as provided in § 22.917, radiotelephony signals applied to the modulator from the modulation limiter must be attenuated as a function of frequency as specified in this paragraph.
- (1) For mobile stations, these signals must be attenuated, relative to the level at 1 kHz, as follows:
- (i) In the frequency ranges of 3.0 to 5.9 kHz and 6.1 to 15.0 kHz, signals must be attenuated by at least 40 \times log (f÷3) dB, where f is the frequency of the signal in kHz.
- (ii) In the frequency range of 5.9 to 6.1 kHz, signals must be attenuated at least 35 dB.
- (iii) In the frequency range above 15 kHz, signals must be attenuated at least 28 dB.
- (2) For base stations, these signals shall be attenuated, relative to the level at 1 kHz, as follows:
- (i) In the frequency range of 3 to 15 kHz, signals must be attenuated by at least 40 \times log (f÷3) dB, where f is the frequency of the signal in kHz.
- (ii) In the frequency range above 15 kHz, signals must be attenuated by at least 28 dB.
- (3) Filtering is not required for the supervisory audio tones, signaling tones or wideband data signals.

§ 22.917 Emission limitations for cellular.

The rules in this section govern the spectral characteristics of emissions in the Cellular Radiotelephone Service.

- (a) <u>Analog radiotelephony emissions</u>. F3E emissions must be used only on the communication channels.
- (b) F3E/F3D emission mask for use with audio filter. For F3E and F3D emissions, except as provided in paragraph (c) of this section, the mean power of emissions must be attenuated below the

mean power of the unmodulated carrier wave (P) as follows:

(1) On any frequency removed from the carrier frequency by more than 20 kHz but not more than 45 kHz:

at least 26 dB:

(2) On any frequency removed from the carrier frequency by more than 45 kHz, up to the first multiple of the carrier frequency:

at least 60 decibels or 43 + 10 log P dB, whichever is the lesser attenuation.

- (c) <u>Alternative F3E/F3D emission mask</u>. For F3E and F3D emissions, transmitters may comply with the emission limitations in this paragraph in fleu of compliance with paragraph (b) of this section and the audio filter requirement of § 22.915.
- (1) The mean power of any emission removed from the carrier frequency by a displacement frequency (f_d in kHz) must be attenuated below the mean power of the unmodulated carrier (P) as follows:
- (i) On any frequency removed from the carrier frequency by more than 12 kHz but not more than 20 kHz:

at least 117 log (f_d + 12) dB;

(ii) On any frequency removed from the carrier frequency by more than 20 kHz, up to the first multiple of the carrier frequency:

at least 100 log (f_d +11) dB or 60 dB or 43 + 10 log P dB, whichever is the lesser attenuation;

- (2) For mobile stations, modulating signals other than the supervisory audio tone in the frequency range of 5.9 to 6.1 kHz must be attenuated, relative to the level at 1 kHz, at least 35 dB.
- (d) <u>F1D emission mask</u>. For F1D emissions, the mean power of emissions must be attenuated below the mean power of the unmodulated carrier (P) as follows:
- (1) On any frequency removed from the carrier frequency by more than 20 kHz but not more than 45 kHz:

at least 26 dB:

(2) On any frequency removed from the carrier frequency by more than 45 kHz but not more than 90 kHz:

at least 45 dB:

(3) On any frequency removed from the carrier frequency by more than 90 kHz, up to the first multiple of the carrier frequency:

at least 60 dB or 43 + 10 log P dB, whichever is the lesser attenuation.

(e) Out of band emissions. The mean power of emissions must be attenuated below the mean power of the unmodulated carrier (P) on any frequency twice or more than twice the fundamental frequency by:

at least 43 + 10 log P dB.

- (f) <u>Mobile emissions in base frequency range</u>. The mean power of any emissions appearing in the base station frequency range from cellular mobile transmitters operated must be attenuated to a level not to exceed -80 dBm at the transmit antenna connector.
- (g) <u>Interference from spurious emissions</u>. If any emission from a transmitter operating in this service results in interference to users of another radio service, the Commission may require a greater attenuation of that emission than specified in this section.
- (h) <u>Measurement procedure</u>. The following spectrum analyzer bandwidth settings should be used for measurement of spurious emissions:
- (1) When operating in the radiotelephony mode or the supervisory audio tone mode:
- (i) For any emission not more than 45 kHz removed from the carrier frequency: 300 Hz;
- (ii) For any emission more than 45 kHz removed from the carrier frequency: 30 kHz.
- (2) When operating in the wideband data mode or the signaling tone mode:
- (i) For any emission not more than 60 kHz removed from the carrier frequency: 300 Hz;
- (ii) For any emission more than 60 kHz removed from the carrier frequency: 30 kHz.

§ 22.919 Electronic serial numbers.

The Electronic Serial Number (ESN) is a 32 bit binary number that uniquely identifies a cellular mobile transmitter to any cellular system. Each mobile transmitter must have a unique ESN and must comply with the following specifications.

- (a) The ESN must be factory set and must not be alterable, transferable, removable or otherwise able to be manipulated in the field.
- (b) The ESN host component must be permanently attached to a main circuit board of the mobile transmitter and the integrity of the unit's operating software must not be alterable. The ESN must be isolated from fraudulent contact and tampering. If the ESN host component does not contain other information, that component must not be removable, and its electrical connections must not be accessible. If the ESN host component contains other information, the ESN must be encoded using one or more of the following techniques:
 - (1) multiplication or division by a polynomial;
 - (2) cyclic coding;
- (3) the spreading of ESN bits over various non-sequential memory locations.
- (c) Cellular mobile equipment must be designed such that any attempt to remove, tamper with, or change the ESN chip, its logic system, or firmware originally programmed by the manufacturer will render the mobile transmitter inoperative.

§ 22.923 Cellular system configuration.

Mobile stations communicate with and through base stations only. Base stations communicate with mobile stations. Auxiliary test stations may communicate with base or mobile stations for the purpose of testing equipment.

§ 22.925 Prohibition on airborne operation of cellular telephones.

Cellular telephones installed in or carried aboard airplanes, balloons or any other type of aircraft must not be operated while such aircraft are airborne (not touching the ground). When any aircraft leaves the ground, all cellular telephones on board that aircraft must be turned off. The following notice must be posted on or near each cellular telephone installed in any aircraft:

"The use of cellular telephones while this aircraft is airborne is prohibited by FCC rules, and the violation of this rule could result in suspension of service and/or a fine. The use of cellular telephones while this aircraft is on the ground is subject to FAA regulations."

§ 22.927 Responsibility for mobile stations.

Mobile stations that are subscribers in good standing to a cellular system are, when receiving service from that cellular system pursuant to legally effective tariff provisions, considered to be operating under the authorization of that cellular system. Cellular system licensees are responsible for exercising effective operational control over mobile stations receiving service through their cellular systems.

- (a) <u>Installation</u>, <u>maintenance</u> and <u>repair</u>. Except for subscriber-provided mobile transmitters, cellular system licensees are responsible for the proper installation, maintenance and repair of mobile transmitters. Subscribers are responsible for the proper installation, maintenance and repair of subscriber-provided mobile transmitters.
- (b) Roamers. Mobile stations that are subscribers in good standing to a cellular system are, while receiving service from a different cellular system pursuant to legally effective tariff provisions, considered to be operating under the authorization of such different system. The licensee of such different system is responsible, during such temporary period, for such mobile stations as if they were subscribers to it.

§ 22.933 Cellular system compatibility specification.

Equipment used in the Cellular Radiotelephone Service must be designed in compliance with the technical specifications for compatibility of mobile and base stations in the Cellular Radiotelephone Service contained in "Cellular System Mobile Station-Land Station Compatibility Specification" (April 1981 Ed.), Office of Engineering and Technology Bulletin No. 53. This bulletin is contained in Appendix D to the Report and Order in CC Docket No. 79-318, and was published in the Federal Register of May 21, 1981. Copies may be obtained from the Commission's copying contractor. Certain special operational features, detailed in Electronic Industries Association Interim Standard CIS-3, may be activated at the option of the local cellular licensee. Use of these special operational features is permissible, provided that the compatibility of equipment within the Cellular Radiotelephone Service as specified in OET Bulletin No. 53 is not affected.

§ 22.935 Procedures for comparative renewal proceedings.

The procedures in this section apply to comparative hearings for renewal proceedings in the Cellular Radiotelephone Service.

- (a) The presiding officer will schedule a first hearing session as soon as practicable after the date for filing rebuttal evidence. This first session will be an evidentiary admission session at which each applicant will identify and offer its previously circulated direct and rebuttal exhibits, and each party will have an opportunity to lodge objections.
- (b) After accepting the exhibits into evidence, the presiding officer will entertain motions to cross-examine and rule whether any sponsoring witness needs to be produced for cross-examination. Determination of what, if any, cross-examination is necessary is within the sound judicial discretion of the presiding officer, the prevailing standard being whether the person requesting cross-examination has persuasively demonstrated that written evidence is ineffectual to develop proof. If cross-examination is necessary, the presiding officer will specify a date for the appearance of all witnesses. In addition, if the designation order points out an area where additional underlying data is needed, the presiding officer will have the authority to permit the limited use of discovery procedures. Finally, the presiding officer may find that certain additional testimony or cross-examination is needed to provide a complete record for the Commission. If so, the presiding officer may schedule a further session.
- (c) After the hearing record is closed, the presiding officer may request Proposed Findings of Fact and Conclusions of Law to be filled within thirty days of the final hearing session. Replies are not permitted except in unusual cases and then only with respect to the specific issues named by the presiding officer.
- (d) The presiding officer will then issue an Initial Decision, preferably within sixty days of receipt of the last pleadings. If mutually exclusive applications are before the presiding officer, the presiding officer will determine which applicant is best qualified. The presiding officer may also rank the applicants in order of merit if there are more than two.
- (e) Parties will have thirty days in which to file exceptions to the Initial Decision. The Common Carrier Bureau has authority to determine, at the time of designation for hearing, that such exceptions will be taken directly to the Commission rather than to the Review Board.

§ 22.937 Demonstration of financial qualifications.

Except as provided in paragraph (g) of this section, each applicant for a new cellular system must demonstrate that it has, at the time the application is filed, either a separate market-specific firm financial commitment or available financial resources sufficient to construct and operate for one year the proposed cellular system. Each applicant for assignment of license or consent to transfer of control must demonstrate that the proposed assignee or transferee has, at the time the application is filed, either a separate market-specific firm financial commitment or available financial resources sufficient to construct and operate for one year the proposed cellular system.

(a) <u>Estimated costs</u>. The demonstration required by this section must include a realistic and prudent estimate of the costs of construction, operating and other initial expenses for one year.

- (b) <u>Source of financing</u>. The firm financial commitment must be obtained from a state or federally chartered bank or savings and loan association, another recognized financial institution, or the financial arm of a capital equipment supplier. The firm financial commitment may be contingent upon the applicant's obtaining an authorization.
- (c) <u>Lender's statement</u>. The firm financial commitment must contain a statement that:
- (1) the lender has examined the financial condition of the applicant, including audited financial statements if applicable, and has determined that the applicant is creditworthy;
- (2) the lender has examined the financial viability of each proposal for which the applicant intends to use the commitment;
- (3) the lender is committed to providing a sum certain to the particular applicant;
- (4) the lender's willingness to enter into the commitment is based solely on its relationship with the applicant; and,
- (5) the commitment is not in any way guaranteed by any entity other than the applicant.
- (d) <u>Showings of financial resources</u>. Applicants relying upon personal or internal financial resources must submit the following:
- audited financial statements, certified within one year of the date of the cellular application, that show the availability of sufficient net current assets to construct and operate for one year the proposed cellular system;
- (2) a balance sheet current within 60 days of the date of filling that shows the continued availability of sufficient net current assets to construct and operate for one year the proposed cellular system; and.
- (3) a certification by the applicant or an officer of the applicant organization attesting to the validity of the unaudited balance sheet.
- (e) <u>Parent corporation financing</u>. Applicants relying upon financing obtained from parent corporations must submit the showings listed in paragraph (d) of this section as the information pertains to the parent corporation.
- (f) Notice upon default. In addition to the disclosures required by paragraph (c) of this section, any loan or other credit arrangement providing for a chattel mortgage or secured interest in any proposed cellular system must include a provision for a minimum of ten (10) days prior written notification to the licensee, and to the Commission, before any such equipment may be repossessed under default provision of the agreement.
- (g) <u>Adjacent system exemption</u>. Any licensee applying for an unserved area adjacent to its existing cellular system, to integrate such area into the existing system, is exempt from the financial demonstration requirements of this section.

§ 22.939 Limitations on amendments to applications.

This section places limits, in addition to those in § 22.122, on amendments to applications for unserved areas.

- (a) Amendments to Phase I applications are not accepted before the conclusion of the random selection process. Minor amendments to Phase I applications may be filed after the random selection process by the tentative selectee. Amendments in compliance with §1.65 of this chapter must be filed within 30 days of Public Notice announcing the tentative selectee.
 - (b) Major amendments to Phase I applications are not accepted.

§ 22.941 System identification numbers.

System identification numbers (SIDs) are 15 bit binary numbers assigned to cellular systems. SIDs are transmitted by the cellular systems so that cellular mobile stations can determine whether the system through which they are communicating is a system to which they subscribe, or whether they are considered by the system to be roamers.

- (a) The Commission assigns an SID to each cellular system on its initial authorization.
- (b) Licensees must notify the Commission (FCC Form 489) of any change in their cellular system's SID(s).

§ 22.943 Limitations on assignment of cellular authorizations.

The following limitations apply to applications for assignment of authorizations in the Cellular Radiotelephone Service.

- (a) <u>Unserved area systems</u>. Except as provided in paragraph (a) (2) of this section, the Commission will not grant any application for assignment of the authorization of a cellular system licensed to serve an unserved area until the system has provided service to the public for one year.
- (1) Licensees must not enter into any agreement (e.g. option agreement or management contract) to transfer control of the licensee of the system until the system has provided service to the public for one year.
- (2) The Commission may grant an application for a <u>pro formal</u> assignment of authorization.
- (b) <u>FSAs</u>. The sale, transfer, assignment or other alienation of any application to operate a new cellular system in a rural service area is prohibited. This limitation includes any form of alienation, including option arrangements and agreements, and equity and debt placement plans.
- (c) <u>Trafficking</u>. Applications for assignment of authorization in the Cellular Radiotelephone Service are subject to the provisions of § 22.139(a) of this part, except for:
- (1) the trading of an ownership interest in an authorized but unconstructed cellular system in one market for a commensurate interest in a cellular system in another market; or,
- (2) assignment of a cellular authorization obtained by random selection, prior to commencement of service.

§ 22.945 Ownership and other interest in applicants.

This section governs interest in applicants with mutually exclusive and same market applications for an initial cellular system. For the purposes of this section, "interest in an application" means interest

in the applicant.

- (a) <u>General</u>. Except as otherwise provided in this section, parties must not have any interest, direct or indirect, in more than one application for authority to operate a new cellular system in the same cellular market.
- (b) Abutting CGSAs. Licensees of existing systems whose cellular geographic service area (CGSA) abuts a proposed CGSA may each file one application that is mutually exclusive with the applications of other such licensees, even though they share common owners, provided that such licensees do not thereby acquire a simultaneous interest in applications for both channel blocks in any geographical area.
- (c) <u>Publicly traded corporate applicants</u>. Parties must not have any interest, direct or indirect, in more than one mutually exclusive application for which the applicant is a publicly traded corporation, except that ownership interests of less than 5% are not considered. Ownership and other interests in applicants are attributed to their holder and deemed cognizable as set forth below.
- (1) <u>Passive investors</u>. Investment companies, as defined in 15 U.S.C. 80a-3, insurance companies and banks holding stock through their trust departments in trust accounts are deemed to have a cognizable interest in a publicly traded cellular applicant only if they hold 10% or more of the stock of the applicant. This provision applies only if an applicant in which such parties hold an interest certifies in its application that no such party has exerted or attempted to exert any influence or control over the officers of the applicant.
- (2) <u>Multiplier</u>. Attribution of ownership interests in a publicly traded cellular applicant that are held indirectly by any party through one or more intervening corporations will be determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain and application of the relevant attribution benchmark to the resulting product, except that wherever the ownership percentage for any link in the chain exceeds 50 percent, it is not included in the multiplication.

§ 22.946 Construction periods and requirements for cellular systems.

This section contains the normal term for construction periods and other service initiation requirements for cellular systems.

- (a) <u>Commencement of service</u>. New cellular systems must be at least partially constructed and begin providing cellular service to the public by the end of the construction periods specified in Table H-1. All construction periods begin on the date of grant of the initial authorization.
- (1) To satisfy the requirement of paragraph (a) of this section, a cellular system must be interconnected with the public switched telephone network (PSTN) and must be providing service to mobile stations operated by its subscribers and roamers. A cellular system is not considered to be providing service to the public if mobile stations can not make telephone calls to landline telephones and receive telephone calls from landline telephones through the PSTN, or if the system intentionally serves only roamer stations.
- (2) The licensee must notify the Commission (FCC Form 489) when the requirements of paragraph (a) of this section are met.
 - (b) Completion of authorized system. Construction of new

Table H-1 - Construction Periods for Cellular Systems

Type of Cellular System	Construction Period
the first system authorized on each channel block in markets 1-90	36 months
the first system authorized on each channel block in all other markets and any subsequent systems authorized pursuant to contracts in partitioned RSAs	18 months
unserved area systems	12 months

cellular systems must be completed in accordance with the following:

- (1) The first cellular system authorized on each channel block in each market must be constructed such that at least 75% of the authorized CGSA (or 75% of the population in the authorized CGSA) is covered within 36 months. If this requirement is not met, the Commission may reduce the authorized CGSA such that the 75% coverage is achieved.
- (2) Each unserved area cellular system must be completed within one year from the date the initial authorization is granted.
- (c) Construction period for major modifications. Major modifications must be constructed within one year from the grant date of the application for modification is granted. In the case of unserved area cellular systems, this does not extend the period, specified in paragraph (b)(2) of this section, for constructing the original proposal. Failure to comply with this requirement results in the termination of the authorization for the major modification, pursuant to § 22.144(b).

§ 22.947 Five year fill-in period.

The licensee of the first cellular system authorized on each channel block in each cellular market is afforded a five year period, beginning on the date the initial authorization for the system is granted, during which it may expand the system within that market.

- (a) Exclusive right to expand within market. Except as provided in paragraph (b) of this section, the Commission does not accept applications for authority to operate a new cellular system in any unserved area on that channel block in that market during the five year fill-in period for each such cellular system.
- (b) <u>Partitioned RSAs</u>. During the five year fill-in period, the licensee of the first cellular system on each channel block in each Rural Service Area (RSA) may enter into contracts with eligible parties, allowing such parties to apply for a new cellular system on that channel block within the RSA. The Commission may grant such applications if they are in compliance with the rules in this part. RSAs with two or more authorized cellular systems on the same channel block during the five year fill-in period are referred to as

partitioned RSAs.

- (1) The contract must define the CGSA of the subsequent cellular system in accordance with § 22.911, including any expansion rights ceded. If not exercised, any such expansion rights terminate at the end of the five year fill-in period.
- (2) The five year fill-in period begins on the date the initial authorization for the first cellular system is granted, and is not extended or affected in any way by the initial authorization of any subsequent cellular systems pursuant to paragraph (b) of this section.
- (c) System information update. Sixty days before the end of the five year fill-in period, the licensee of the each cellular system authorized on each channel block in each cellular market must file, in triplicate, a full scale map, a reduced map, and an updated channel usage chart. Separate maps must be submitted for each market into which the CGSA extends, showing the extension area in the adjacent market. Maps showing extension areas must be marked and labeled for the market into which the CGSA extends. These maps and the channel usage chart must accurately depict the cell locations and coverage of the system at the end of the five year fill-in period. The maps and chart must be filed at the Mobile Services Division, Common Carrier Bureau, Federal Communications Commission, Washington, DC 20554. If any changes to the system occur after the filing of these maps and chart, but before the end of the five year fill-in period, the licensee must file, in triplicate, additional maps and/or charts as necessary to insure that the celllocations and coverage of the system as of the end of the five year fill-in period are accurately depicted.
- (1) The scale of the full-size map must be 1:250,000, regardless of whether any different scale is used for the reduced map. The map must have a legend, a distance scale and correctly labeled latitude and longitude lines. The map must be clear and legible. The map must accurately show the cell sites (transmitting antenna locations), the entire CGSA, any extension of the composite service area boundary beyond the CGSA (see § 22.911) and the relevant portions of the cellular market boundary. The date the map was initially drawn or revised must appear on the map.
- (2) The reduced map must be a proportional reduction, to $8\frac{1}{2}$ × 11 inches, of the full-size map required in paragraph (c)(1) of this section, unless it proves to be impractical to depict the entire cellular market by reducing the full-size map. In such instance, an $8\frac{1}{2}$ × 11 inch map of a different scale may be substituted, provided that the required features of the full-size map are clearly depicted and labeled.

§ 22.949 Unserved area licensing phases, procedures and filing windows.

The licensing process for unserved areas in cellular markets has two phases: Phase I and Phase II.

- (a) <u>Phase I</u>. Phase I is a one-day filing window that provides an opportunity for all parties to apply for authority to operate new cellular systems in unserved areas.
- (1) Phase I applications for authority to operate a new cellular system in an unserved area must be filled on the 31st day after the expiration of the five year fill-in period of the authorized system on the desired channel block in the desired market.

- (2) Only one Phase I application is granted on each channel block in each market. All timely-filed Phase I applications for authority to operate a new cellular system in the same market on the same channel block are included in a random selection process, after which the selected application may be granted and the others dismissed.
- (b) <u>Phase II</u>. Phase II is an open-ended filing process that allows parties to apply for any unserved areas that may remain after the Phase I process is complete.
- (1) If a Phase I application for authority to operate a new cellular system in an unserved area is granted. Phase II applications for authority to operate a new cellular system in any remaining unserved area may be filed on or after the 121st day after the Phase I application was granted. If no Phase I applications for authority to operate a new cellular system in an unserved area are granted, Phase II applications for authority to operate a new cellular system in an unserved area may be filed on or after the 31st day after the Commission dismissed the last pending Phase I application on the desired channel block in the desired market. If no Phase I applications for authority to operate a new cellular system in an unserved area are received, Phase II applications for authority to operate a new cellular system in an unserved area may be filed on or after the 32nd day after the expiration of the five year fill-in period of the authorized system on the desired channel block in the desired market.
- (2) All mutually exclusive Phase II applications for authority to operate a new cellular system filed on the same day are included in a random selection process, after which the selected application may be granted and the others dismissed. Otherwise, the first-filed Phase II application, as determined by the filing date may be granted and any other mutually exclusive applications dismissed.
- (c) <u>Filing date</u>. For the purposes of this section, the filing date of an application is the date on which that application was received or the date on which the most recently filed major amendment to that application was received.
- (d) <u>Settlements</u>. Settlements among some, but not all, applicants with mutually exclusive applications (including same market Phase I applications) for unserved areas are prohibited. Settlements among all applicants with mutually exclusive applications (or same market Phase I applications) are allowed and must be filed no later than 2 business days before the random selection process is scheduled to take place.

\$ 22.951 Minimum coverage requirement.

Applications for authority to operate a new cellular system in an unserved area, other than those filed by the licensee of an existing system that abuts the unserved area, must propose a contiguous cellular geographical service area (CGSA) of at least 130 square kilometers (50 square miles).

§ 22.953 Content and form of applications.

Applications for authority to operate a new cellular system in an unserved area must comply with the specifications in this section.

(a) Forms, pages and exhibits. Forms, pages and exhibits must be prepared exactly as described and assembled in the order listed in this section.

- (1) <u>Application cover</u>. The paper original of each application must be enclosed in a stiff cover fastened securely along the left edge, without exposed sharp edges.
- (2) <u>Transmittal sheet</u>. The first page after the front cover of the application must be the transmittal sheet.
- (i) Copies of the required transmittal sheet may be obtained by contacting the Consumer Assistance Office, Federal Communications Commission, 1919 M Street NW, Washington, DC 20554.
- (ii) On the transmittal sheet, the following information is required: the name of the applicant, the channel block, and the market number or numbers and the market name or names in which the proposed CGSA is located. This information on the transmittal sheet must match exactly the information on the jacket of the microfiche and the cover of the application.
- (iii) The transmittal sheet also contains a certification. Applicants must certify to the following:

I hereby certify that this application for an authorization in the Cellular Radiotelephone Service is complete in every respect and contains all of the information required by FCC Form 401 and the Federal Communications Commission's rules governing this service. I acknowledge that, if upon examination by the Commission, this certification is found to be incorrect, the Commission will dismiss this application without further consideration.

I certify that I am the real party-in-interest in this application and there are no agreements or understandings other than those, if any, disclosed in this application, which provide that someone other than the applicant has a direct or indirect interest in the application. I also certify that the applicant intends to construct and operate the station as proposed and that there are no agreements or understandings that are inconsistent with that intent.

I declare, under penalty of perjury, that I am the authorized representative of the above-named applicant in the matter of this application, that I have read the foregoing certification, and that the matter and things therein stated are true and correct.

- (iv) The certification must be signed and dated in accordance with the requirements of \$1.743 of this chapter. The certification must be signed in ink. Mechanical reproductions of the signature must not be used. The name of and position held by the person signing must be typed or clearly and legibly printed beneath the signature.
- (3) <u>Table of contents</u>. The table of contents must list all of the exhibits to the application.
- (4) FCC Form 401. All information required for cellular applications on FCC Form 401 must be supplied.
- (5) Exhibits. The following exhibits must be set off by tabs and numbered as follows:
- (i) EXHIBIT I full-size map. The scale of the full-size map must be 1:250,000, regardless of whether any different scale is used for the reduced map required in Exhibit II. The map must have a legend, a distance scale and correctly labeled latitude and longitude

lines. The map must be clear and legible. The map must accurately show the cell sites (transmitting antenna locations), the entire CGSA, any extension of the composite service area boundary beyond the CGSA (see § 22.911) and the relevant portions of the cellular market boundary.

- (ii) EXHIBIT II reduced map. This map must be a proportional reduction, to 8½ × 11 inches, of the full-size map required for Exhibit I, unless it proves to be impractical to depict the entire cellular market by reducing the full-size map. In such instance, an 8½ × 11 inch map of a different scale may be substituted, provided that the required features of the full-size map are clearly depicted and labeled.
- (iii) EXHIBIT III engineering. This exhibit must contain the data and methodology used to calculate the CGSA and service area boundary.
- (iv) EXHIBIT IV channel plan. This exhibit must show which specific channels (or groups) are to be used at each cell site. Any necessary table for converting channel numbers to center frequencies must be provided.
- (v) EXHIBIT V ownership information. This exhibit must contain the information required by § 22.108. Additionally, individual applicants must disclose, in this exhibit, all interests (including those less than 5%) in publicly traded corporation(s) that have applications which are mutually exclusive with the individual's application.
- (vi) EXHIBIT VI service proposal. This exhibit must describe the services proposed for subscribers and roamers, including the proposed method for handling complaints.
- (vii) EXHIBIT VII cellular design. This exhibit must show that the proposed system design complies with the Commission's cellular system design concepts, and must describe the method proposed to expand the system in a coordinated fashion as necessary to address changing demand for cellular service.
- (viii) EXHIBIT VIII blocking level. This exhibit must disclose the blocking probability or other criteria to be used to determine whether it is necessary to take measures to increase system capacity to maintain service quality.
- (ix) EXHIBIT IX start-up expenses. This exhibit must disclose in detail the projected cost of construction and other initial expenses of the proposed system, and how the applicant intends to meet these expenses and the costs of operation for the first year.
- (x) EXHIBIT X interconnection arrangements. This exhibit is required for applicants that provide public landline message telephone service in any portion of the proposed CGSA. This exhibit must describe exactly how the proposed system would interconnect with the landline network. The description must be of sufficient detail to enable a competitor to connect with the landline system in exactly the same manner, if the competitor so chooses.

§ 22.955 Canadian condition.

Pursuant to an agreement between the Commission and the Department of Communications in Canada, authorizations for cellular systems within 72 kilometers (45 miles) of the U.S.-Canadian border must have the following condition attached:

This authorization is subject to the condition that, in the event

that cellular systems using the same channel block as grafited herein are authorized in adjacent territory in Canada, coordination of any of your transmitter installations which are within 72 kilometers (45 miles) of the U.S.-Canadian border shall be required to eliminate any harmful interference that might otherwise exist and to insure continuance of equal access to the channel block by both countries.

6 22 957 Mexican condition.

Pursuant to an agreement between the United States and Mexico, Commission authorizations for cellular systems within 72 kilometers (45 miles) of the United States-Mexican border must have the following condition attached:

This authorization is subject to the condition that, in the event cellular systems using the same frequencies granted herein are authorized in adjacent territory in Mexico, coordination of your transmitter installations which are within 72 kilometers (45 miles) of the United States-Mexico border shall be required to eliminate any harmful interference that might otherwise exist and to ensure continuance of equal access to the frequencies by both countries. The operator of this system shall not contract with customers in Mexico, and further, users of the system must be advised that operation of a mobile unit in Mexico is not permitted at this time without the express permission of the Mexican government. The above conditions are subject to modification pending further notice from the Commission.

§ 22.959 Rules governing processing of applications for initial systems.

Pending applications for authority to operate the first cellular system on a channel block in a market continue to be processed under the rules governing the processing of such applications that were in effect when those applications were filed.

Subpart I - Offshore Radiotelephone Service

\$ 22.1001 Scope.

The rules in this subpart govern the licensing and operation of offshore radiotelephone stations. The licensing and operation of these stations and systems is also subject to rules elsewhere in this part that apply generally to the public mobile services. However, in case of conflict, the rules in this subpart govern.

§ 22.1003 Eligibility.

Offshore central station licenses may be licensed to communications common carriers. Offshore subscriber stations may be licensed to common carriers or users of the service.

§ 22.1005 Priority of service.

Facilities in the Offshore Radiotelephone Service are intended primarily for rendition of public message service between offshore subscriber and central stations. However, they may also be used to render private leased line communication service, provided that such usage does not reduce or impair the extent or quality of communication service which would be available, in the absence of private leased line service, to the general public receiving or subsequently requesting public message service from an offshore central station.

§ 22.1007 Channels for offshore radiotelephone systems.

The channels listed in this section are allocated for paired assignment to transmitters located in the specified geographical zones that provide offshore radiotelephone service. All channels have a bandwidth of 20 kHz and are designated by their center frequencies in MegaHertz.

(a) Zone A - Southern Louisiana. The geographical area in Zone A is bounded as follows:

From longitude W.87°45' on the East to longitude W.94°00' on the West and from the 4.8 kilometer (3 mile) limit along the Gulf of Mexico shoreline on the North to the limit of the Outer Continental Shelf on the South.

(1) These channels may be assigned for use by offshore central (base/fixed) or subscriber stations (fixed, temporary fixed, surface and/or airborne mobile) as indicated, for voice-grade general communications:

central	subscriber	central	subscribe
488.025	491.025	488.225	491.225
488.050	491.050	488.250	491.250
488.075	491.075	488.275	491.275
488.100	491.100	488.300	491.300
488.125	491.125	488.325	491.325
488.150	491.150	488.350	491.350
488.175	491.175	488.375	491,375
488.200	491.200	488.400	491.400

(2) These channels may be assigned for use by offshore central (base/fixed) or subscriber stations (fixed, temporary fixed, surface and/or airborne mobile) as indicated, for voice-grade general communications and private line service:

central	subscriber	central	subscriber
488.425 .	491.425	488.575	491.575
488.450	491.450	488.600	491.600
488.475 .	491.475	488.625	491.625
488.500 .	491.500	488.650	491.650
488.525	491.525	488.675	491.675
488.550 .	491.550	488.700	491.700

(3) These channels may be assigned for use by relay stations in systems where it would be impractical to provide offshore radiotelephone service without the use of relay stations.

488.725	491.725	488.775	491.775
488.750	491.750	488.800	491.800

(4) These channels may be assigned for use by offshore central (base/fixed) or subscriber stations (fixed, temporary fixed, surface and/or airborne mobile) as indicated, for emergency communications involving protection of life and property.

central /	subscriber	central	subscriber
	491.825	488.875	491.875
488.850	491.850	488.900	491.900

(5) These channels may be assigned for use by offshore central (base/fixed) or subscriber stations (fixed, temporary fixed, surface and/or airborne mobile) as indicated, for emergency auto alarm and voice transmission pertaining to emergency conditions only.

central subscriber

488.950 491.950

(6) These channels may be assigned for use by offshore central (base/fixed) or subscriber stations (fixed, temporary fixed, surface and/or airborne mobile) as indicated, for emergency shut-off remote control telemetry, environmental data acquisition and dissemination, or facsimile transmissions.

central	subscriber	central	subscriber
489.000 .	492.000	489.200	492.200
489.025	492.025	489.225	492.225
489.050 .	492.050	489.250	492.250
489.075 .	492.075	489.275	492.275
489.100 .	492.100	489.300	492.300
489,125 .	492.125	489.325	492.325
489.150 .	492.150	-	492.350
	492.175		492.375

(7) These channels may be assigned for use by offshore central (base/fixed) or subscriber stations (fixed, temporary fixed, surface and/or airborne mobile) as indicated, for private line service:

central	subscriber	central	subscribe
489.400 .	492.400	489.725	492.725
489.425 .	492.425	489.750	492.750
489.450 .	492.450	489.775	492.775
489.475 .	492.475	489.800	492.800
489.500 .	492.500	489.825	492.825
489.525	492.525	489.850	492.850
489.550	492.550	489.875	492.875
489.575	492.575	489.900	492.900
489.600	492.600	489.925	492.925
489.625	492.625	489.950	492.950
489.650	492.650	489.975	492.975
489.675	492.675	490.000	493.000
489.700	492.700		

- (8) Interstitial channels. Interstitial channels are those with center frequencies offset by \pm 12.5 kHz from the listed center frequencies. The Commission may assign interstitial channels to offshore stations in Zone A subject to the following conditions:
- (i) Offshore stations transmitting on interstitial channels must be located east of W.92° longitude.
- (ii) Operations on interstitial channels are considered to be secondary to operations on channels with the listed center frequencies.
- (iii) Offshore stations operating on interstitial channels must be used only for voice grade general communications or to provide for private line service.

Note: These channels are contained in UHF TV channel 17.

(b) Zone B - Southern Louisiana - Texas. The geographical area in Zone B is bounded as follows:

From longitude W.87°45' on the East to longitude W.95°00' on the West and from the 4.8 kilometer (3 mile) limit along the Gulf of Mexico shoreline on the North to the limit of the Outer Continental Shelf on the South.

These channels may be assigned for use by offshore central (base/fixed) or subscriber stations (fixed, temporary fixed, surface and/or airborne mobile) as indicated, for voice-grade general communications and private line service:

central	subscriber	central	subscriber
485.025	482.025	486.025 .	483.025
485.050	482.050	486.050 .	483.050
485.075	482.075	486.075	483.075
	482.100		483.100
485.125	482.125	486.125	483.125
485.150	482.150	486.150	483.150
485.175 .	482.175	486.175	483.175
485.200 .	482.200	486.200	483.200
485.225 .	482.225	486.225	483.225
485.250 .	482.250	486.250	483.250
485.275 .	482.275	486.275	483.275
	482.300		483.300
	482.325		483.325
	482.350		483.350
485.375 .	482.375	486.375	483.375
	482.400		483.400
	482.425		483.425
	482.450		483.450
	482.475		483.475
	482.500		483.500
	482.525		483.525
	482.550		483.550
	482.575		483.575
	482.600		483.600
	482.625		483.625
	482.650		483.650
	482.675		483.675
	482.700		483.700
	482.725 482.750		483.725
	482.750 482.775		483.750
	482.775		483.775
			483.800
	482.825 482.850		483.825 483.850
	482.875 482.900		483.875 483.900
	482.925 482.950		483.925 483.950
	482.950		
	482.975		483.975 480.050
480.000	483.000	4//.050	480.050

Note: These channels are contained in UHF TV channel 16.

(c) Zone C - Southern Texas. The geographical area in Zone C is bounded as follows:

Longitude W.94°00' on the East, the 4.8 kilometer (3 mile) limit on the North and West, a 282 kilometer (175 mile) radius from the reference point at Linares, N.L., Mexico on the Southwest, latitude N.26°00' on the South, and the limits of

the outer continental shelf on the Southeast.

(1) These channels may be assigned for use by offshore central (base/fixed) or subscriber stations (fixed, temporary fixed, surface and/or airborne mobile) as indicated, for emergency auto alarm and voice transmission pertaining to emergency conditions only.

central subscriber

476.950 479.950

(2) These channels may be assigned for use by offshore central (base/fixed) or subscriber stations (fixed, temporary fixed, surface and/or airborne mobile) as indicated, for voice-grade general communications and private line service:

476.025 479.025	477.075 480.075
476.050 479.050	477.100 480.100
476.075 479.075	477.125 480.125
476.100 479.100	477.150 480.150
476.125 479.125	477.175 480.175
476.150 479.150	477.200 480.200
476.175 479.175	477.225 480.225
476.200 479.200	477.250 480.250
476.225 479.225	477.275 480.275
476.250 479.250	477.300 480.300
476.275 479.275	477.325 480.325
476.300 479.300	477.350 480.350
476.325 479.325	477.375 480.375
476.350 479.350	477.400 480.400
476.375 479.375	477.425 480.425
476.400 479.400	477.450 480.450
476.425 479.425	477.475 480.475
476.450 479.450	477.500 480.500
476.475 479.475	477.525 480.525
476.500 479.500	477.550 480.550
476.525 479.525	477.575 480.575
476.550 479.550	477.600 480.600
476.5 75 479.575	477.625 480.625
476.600 479.600	477.650 480.650
476.625 479.625	477.675 480.675
476.65 0 479 .650	477.700 480.700
476.675 479.675	477.725 480.725
476.700 479.700	477.750 480.750
476.725 479.725	477.775 480.775
476.750 479.750	
476.775 479.775	477.825 480.825
476.800 479.800	477.850 480.850
476.825 479.825	477.875 480.875
476.850 479.850	477.900 480.900
476.875 479.875	477.925 480.925
476.900 479.900	477.950 480.950
477.000 480.000	477.975 480.975
477.025 480.025	

\$ 22,1009 Transmitter locations.

The rules in this section establish limitations on the locations from which stations in the Offshore Radiotelephone Service may transmit.

(a) All stations. Offshore stations must not transmit from locations outside the boundaries of the appropriate Zones specified in § 22.1007. Offshore stations must not transmit from locations within 241 kilometers (150 miles) of any full-service television station

that transmits on the TV channel containing the channel on which the offshore station transmits.

(b) Airborne subscriber stations. Airborne subscriber stations must not transmit from altitudes exceeding 305 meters (1000 feet) above mean sea level. Airborne mobile stations in Zone A must not transmit from locations within 129 kilometers (80 miles) of Lake Charles, Louisiana. Airborne mobile stations in Zone B must not transmit from locations within 129 kilometers (80 miles) of Lafayette, Louisiana. Airborne mobile stations in Zone C must not transmit from locations within 129 kilometers (80 mile) of Corpus Christi or locations within 129 kilometers (80 miles) of Houston, Texas.

§ 22.1011 Antenna height limitations.

The antenna height of offshore stations must not exceed 61 meters (200 feet) above mean sea level. The antenna height of offshore surface mobile stations must not exceed 10 meters (30 feet) above the waterline.

§ 22.1013 Effective radiated power limitations.

The effective radiated power (ERP) of transmitters in the Offshore Radiotelephone Service must not exceed the limits in this section.

- (a) <u>Maximum power</u>. The ERP of transmitters in this service must not exceed 1000 Watts under any circumstances.
- (b) <u>Mobile transmitters</u>. The ERP of mobile transmitters must not exceed 100 Watts. The ERP of mobile transmitters, when located within 32 kilometers (20 miles) of the 4.8 kilometer (3 mile) limit, must not exceed 25 Watts. The ERP of airborne mobile stations must not exceed 1 Watt.
- (c) <u>Protection for TV Reception</u>. The ERP limitations in this paragraph are intended to reduce the likelihood that interference to television reception from offshore radiotelephone operations will occur.
- (1) <u>Co-channel protection</u>. The ERP of offshore stations must not exceed the limits in Table I-1. The limits depend upon the height above mean sea level of the offshore transmitting antenna and the distance between the antenna location of the offshore transmitter and the antenna location of the main transmitter of the nearest full-service television station that transmits on the TV channel containing the channel on which the offshore station transmits.
- (2) <u>Adjacent channel protection</u>. The ERP of offshore stations located within 128.8 kilometers (80 miles) of the main transmitter antenna of a full service TV station that transmits on a TV channel adjacent to the TV channel which contains the channel on which the offshore station transmits must not exceed the limits in the Table I-2. The limits depend upon the height above mean sea level of the offshore transmitting antenna and the distance between the location of the offshore transmitter and the 4.8 kilometer (3 mile) limit.

§ 22.1015 Repeater operation.

Offshore central stations may be used as repeater stations provided that the licensee is able to maintain control of the station, and in particular, to turn the transmitter off, regardless of whether associated subscriber stations are transmitting at the time.

§ 22.1025 Permissible communications.

Offshore central stations must communicate only with subscriber stations (fixed, temporary-fixed, mobile and airborne). Offshore subscriber stations must normally communicate only with and through offshore central stations. Stations in the Offshore Radiotelephone Service may communicate through relay stations authorized in this service.

§ 22.1031 Temporary fixed stations.

The Commission may, upon proper application therefor, authorize the construction and operation of temporary fixed stations in the Offshore Radiotelephone service to be used only when the service of permanent fixed stations is disrupted by storms or emergencies or is otherwise unavailable.

- (a) <u>Six month limitation</u>. If it is necessary for a temporary fixed station to remain at the same location for more than six months, the licensee of that station must apply for authorization to operate the station at the specific location at least 30 days before the end of the six month period.
- (b) International communications. Communications between the United States and Mexico must not be carried out using a temporary fixed station without prior authorization from the Commission. Licensees desiring to carry out such communications should apply sufficiently in advance to allow for the time necessary to coordinate with Canada or Mexico.

§ 22.1035 Construction period.

The construction period (see § 22.142) for offshore stations is 18 months.

§ 22.1037 Application requirements for offshore stations.

Applications for new Offshore Radiotelephone Service stations must contain an exhibit showing that:

- (a) the applicant has notified all licensees of offshore stations located within 321.8 km (200 miles) of the proposed offshore station, by providing the data in paragraph (a) of this section, at least thirty days before filing the application:
- (1) The name, business address, channel coordinator, and telephone number of the applicant.
- (2) The location and geographical coordinates of the proposed station.
 - (3) The channel and type of emission.
 - (4) The height and type of antenna.
 - (5) The bearing of the main lobe of the antenna.
 - (6) The effective radiated power.
- (b) the proposed station will not interfere with the primary ORS channels by compliance with the following separations:

Table I-1 - Maximum ERP (Watts)

Distance	30 meters (100 feet)	45 meters (150 feet)	61 meters (200 feet)
338 km (210 mi)	1000	1000	1000
330 km (205 mi)	1000	900	800
322 km (200 mi)	800	710	630
314 km (195 mi)	590	520	450
306 km (190 mi)	450	400	330
298 km (185 mi)	320	280	240
290 km (180 mi)	250	210	175
282 km (175 mi)	180	150	130
274 km (170 mi)	175	110	100
266 km (165 mi)	95	80	70
258 km (160 mi)	65	55	50
249 km (155 mi)	50	40	35
241 km (150 mi)	35	30	25

Table I-2 - Maximum ERP (Watts)

Distance from the 4.8 km (3 mi)	30 meters (100 feet)	61 meters (200 feet)
6.4 km (4 mi)	25	6
8.0 km (5 ml)	40	10
9.7 km (6 ml)	65	15
11.3 km (7 mi)	100	25
12.9 km (8 mi)	150	35
14.5 km (9 mi)	215	50
16.1 km (10 mi)	295	70
17.7 km (11 ml)	400	100
19.3 km (12 ml)	530	130
20.9 km (13 mi)	685	170
22.5 km (14 mi)	870	215
24.1 km (15 mi)	1000	270
25.7 km (16 mi)	1000	415
27.4 km (17 mi)	1000	505
29.0 km (18 mi)	1000	610
30.6 km (19 mi)	1000	730
32.2 km (20 mi)	1000	865
33.8 km (21 mi)	1000	1000

⁽¹⁾ co-channel to a distance of 241.4 km (150 miles).

⁽²⁾ if interstitial channels are used, adjacent channels (\pm 12.5 kHz) to a distance of 80.5 km (50 miles).

⁽³⁾ third order intermodulation channels (\pm 12.5 kHz) to a distance of 32.2 km (20 miles).

⁽⁴⁾ if the proposed transmitting antenna site is located west of longitude W.93°40', and within 32.2 km (20 miles) of the shoreline, and proposes use of the channels listed in § 22.1007(b), no third-order intermodulation interference would be caused to any base or mobile station using the channels between 488 and 494 MHz.

APPENDIX C	CURRENT RULE	PROPOSED RULE
Rules Cross-reference Table	22.30	
CURRENT RULE PROPOSED RULE	22.31 22.32	22.132
22.0 (a) and (b)	22.33 (a)	
22.0 (c), (d) and (e) (REMOVED)	22.35	(REMOVED)
22.1 (REMOVED) 22.2	22.39	
22.3	22.40 (c)	
22.4 (a)	22.43 (a)(1)	
22.4 (b)	22.43 (a)(2) (Offshore)	
22.6 (a)	22.43 (a)(2) (Rural)	22.713
22.6 (b) and (e)	22.43 (a)(2) (Air-ground)	
22.6 (d)	22.43 (a)(3)	
22.9 (a) and (b)	22.43 (b)	22.142 (c) and (d)
22.9 (c)(1)	22.43 (c)(1) and (c)(5)	
22.9 (d)	22.43 (c)(3)	, ,
22.11	22.43 (c)(4)	
22.11 (b)	22.43 (d)	
22.13 (a)(2)-(a)(6)	22.44	22.144
22.13 (b)	22.45	
22.13 (f)	22.100 (a)	
22.15	22.100 (c)	
22.15 (b)(1)(i) and (b)(1)(iii)	22.100 (d)	
22.15 (b)(2) (paging)	22.100 (a) (1)	
22.15 (b)(2) (two-way)	22.101	
22.15 (c)(1)	22.104 (a)(1), (a)(2) and (a)(4)	
22.15 (i)(2)	22.104 (b)(1)	
22.15 (i) (3)	22.104 (b)(2)	1 / 1 /
22.15 (j) and (k) (general)	22.106	· · · · · · · · · · · · · · · · · · ·
22.15 (l)	22.107	· · · · · · · · · · · · · · · · · · ·
22.15 (m) and (n) (REMOVED) 22.16 (REMOVED)	22.108	
22.19	22.110	
22.20 (a)	22.113	
22.20 (b) (REMOVED) 22.20 (d) 22.128 (b)	22.115	
22.21	22.117 (b) and (c)	22.165
22.22	22.119	·
22.23 (c)	22.121	
22.23 (e)	22.200	
22.23 (g)(1), (g)2), (g)(4), (g)(6) and (g)(7) (REMOVED) 22.23 (g)(3)	22.201	
22.23 (g)(5)	22.210	
22.23 (h) (REMOVED) 22.25 22.125	22.212	
22.25	22.213	
22.27	22.303	22.317
22.27	22.304 22.307	,
22.27 (b)(2) (REMOVED)	22.308	
22.27 (c) (REMOVED)	22.309	
22.28	22.400	
22.129	££.701	

CURRENT RULE	PROPOSED RULE	CURRENT RULE	PROPOSED RULE
22.402	22.409 (e)	22.506 (f)(1) (two-way)	
22.403	22.409	22.506 (f)(2) (nationwide paging)
22.404	22.403	22.506 (f)(2) (931 MHz, except n	ationwide) 22.535 (d)
22.405		22.506 (f)(3) (paging)	22.559 (b)
22.406			
22.407			(REMOVED)
22.500 (a)		• •	
22.500 (b) and (c)			22.357 (d)
22.501 (a)(1), (a)(4), (d), (h), (p)(1)		the state of the s	
22.501 (a) (2) and (a) (3)			
22.501 (a) (5)			
22.501 (b) and (i)(1)			
22.501 (c)		* *	(REMOVED)
22.501 (e), (f) and (m)			
22.501 (i)(i)			(REMOVED)
22.501 (f)(2)			
22.501 (g)(1), (g)(2) and (k)(4)			
22.501 (g)(3) and (k)			
22.501 (i)(2)			
22.501 (i)(3)			(REMOVED)
22.501 (j)			
22.501 (j)(1)			22.811
22.501 (j) (2)		, , ,	(REMOVED)
22.501 (j)(3), (j)(4) and (j)(6)	22.657	22.522	(REMOVED)
22.501 (j)(5), (j)(6) and (j)(7)	22.659	22.523	(REMOVED)
22.501 (k)		22.524	
22.501 (k)(1) and (k)(3)	22.625 (b)(1)	22.525 (a)	22.539 (c)
22.501 (k)(2)			
22.501 (k)(5)(i), (k)(5)(iii) and (k)(5)(iv)	22.627 (b)		22.539 (e)
22.501 (k)(5)(ii)			(REMOVED)
22.501 (k)(6)	,	• • •	22.539 (b) and (f)
22.501 (m)		- 17	22.539 (a)
22.501 (m)(4)			
22.501 (n)			
22.501 (p)(2)(i)			3)
22.501 (p)(2)(ii)	, ,		
22.503			(REMOVED)
22.504 (a) (paging)			22.725 (b)
22.504 (a) (two-way)			
22.504 (b)(1) (including charts)			
22.504 (b)(2)			(REMOVED)
22.504 (c)			22.357 (d)
22.505 (a) and (b) (paging)	22.535 (c)		
22.505 (a) (two-way)	22.565 (c)	22.607	
22.505 (c) (paging)	22.535 (d)	22.608	
22.505 (c) (two-way)	,		
22.505 (c)(1)			
22.505 (c)(2) (nationwide paging)			
22.505 (c) (2) (931 MHz, except nationwide)	` '		
22.505 (c)(3) (paging)			
22.505 (c)(3) (two-way)			
22.506 (a) (paging)		22.902 (d)	
22.506 (a) (two-way)			
22.506 (b)	,	22.903	
22.506 (d) (power)			
22.506 (d) (idle tone)			
22.506 (e)			
22.506 (f) (paging)		22.908	
22.506 (f) (two-way)		22.909	· · · · · · · · · · · · · · · · · · ·
22.506 (f)(1) (paging)		22.910	
TANK A MILL OF THE PARTY OF THE	· · · · · · · · · · · · · · · · · · ·		

CURRENT RULE	PROPOSED RULE	CURRENT RULE	PROPOSED RULE
22.911 (a), (b) and (c) 22.911 (a)(1) 22.911 (d) 22.912 22.913 22.914 22.915 22.916 (a) and (c) 22.916 (b)(5)-(b)(8) 22.917 22.918 (a), (b) and (d) 22.918 (c) 22.919 22.920 (a) and (b) 22.920 (c) 22.921 22.922 22.923 22.924 (a) 22.924 (a) 22.924 (a)(1) and (a)(2) 22.925 22.926 (system information update) 22.930 22.1001 22.1001 22.1001 (d)(1) 22.1001 (d)(3) 22.1001 (d)(3) 22.1001 (d)(6) 22.1001 (d)(7) 22.1002 22.1003 22.1004 (a) and (b) 22.1004 (c) 22.1005 22.1006 22.1007 22.1008 22.1100 22.1101 22.1100 22.1101 22.1100 22.1101 22.1100 22.1101 22.1100 22.1100 22.1100 22.1100 22.1100 22.1100 22.1100 22.1100 22.1100 22.1100 22.1100 22.1100 22.1100 22.1100 22.1100 22.1100 22.1100 22.1100 22.1100 22.1100 22.1111 22.1113 22.1115 22.1117 22.1119 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111 22.1111	22.923	(NEW)	22.371
(NEW)	22.167		

FEDERAL COMMUNICATIONS COMMISSION Washington, D.C. 20554

Approved by OMB
####-###
Expires dd/mm/yy

Application for Public Mobile Services Radio Station Authorization

General Information and Instructions

- 1. The FCC Form 401 is in two parts, Schedule A and Schedule B. Complete one Schedule B for each antenna location. In some instances the Schedule B must be used with FCC Form 489.
- 2. Remove the instructions before submitting the form to the Commission.
- 3. All dates must be in the format of ddmmyy.

Uses of FCC Form 401

4. Although Item 12 indicates some uses of the Form 401, the Commission's Rules should be referenced for a complete listing.

Applicable Rules and Regulation

5. Before the application is prepared, applicant should refer to Part 22 of the Commission's Rules and Regulations, copies of which may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Subparts B and C of Part 22 apply to all types of applicants and in certain instances may require information to be filed with an applications in addition to that specified in this application form. Applicants should make every effort to file complete applications. Failure to do so can result in a dismissal or return of the application or a delay in the processing of the application.

Paper Copies

6. Number of **paper copies** to be submitted varies depending on the type of service applied for. See 47 CFR 22.6 for specific instructions.

Microfiche Copies

7. All filings of this form must be submitted on microfiche. Submit three microfiche (one original and two copies). See 47 CFR 22.6. Each microfiche must be a copy of the signed original. Each microfiche copy must be a 148mm X 105mm negative (clear transparent characters appearing on an opaque background) at 24X to 27X reduction for microfiche or microfiche jackets. One of the microfiche sets must be a silver halide camera master or a copy made on silver halide film such as Kodak Direct Duplicating Film. The microfiche must be placed in paper microfiche envelopes and submitted in a 5" x 7.5" envelope. Row "A" (the first row for page images) of the first fiche must be left blank.

Fee

8. A processing fee may be required with this application. Refer to either 47 CFR 1.1105, the Common Carrier Services Fee Filing Guide, or call 202-632-FEES for appropriate fee. DO NOT SEND CASH. Payment may be made by check, bank draft, or single money order payable to: Federal Communications Commission.

Specific Instructions

- 9. Cellular Radiotelephone Service See Subpart H, Part 22 which specifies additional exhibits that are required.
- 10. Item 3 need only be completed if different than Item 1.
- 11. If information for Item 4(b) is unknown, then enter in Item 4(c) the date pending application was filed.
- 12. In reference to Item 9, a "Finders" application is defective if the channel(s) requested are being used by the current licensee.

- 13. If the antenna structure in Item 18 is not in an area designated by a street address, give the distance and direction from the nearest town.
- 14. If the answer to Item 27 is "yes," then attach an exhibit with a table including the Call Sign (if known), File Number (if pending), Base Station Location (City and State), Channel, and Name of Licensee of the applicable base stations.
- 15. If the antenna in Item 34 is omnidirectional and is mounted on the side of a supporting structure, check to see that the antenna pattern (polar diagram) remains omnidirectional.
- 16. For Item 34, specify bearings of directions of maximum gain, in degrees from true north.
- 17. For Item 35(c) use the following codes:

BS - Base Station
RP - Repeater
TS - Test
SI - Signaling
SB - Subscriber Station

CT - Control Station
ST - Standby
DI - Dispatch
CO - Central Office
RX - Relay Station

- IO Inter-Office
- 18. Item 35(d) need only be completed for **non-standard** emission designators.
- 19. If the answer to Item 36 is "yes" then attach an exhibit with the required environmental assessments per Rules 1.1308 and 1.1311.

Exhibits

- 20. Each document required to be filed as an exhibit should be current as of the date of filing. If reference is made to information already on file with the Commission, see item 21 below.
- (A) If the applicant does **not** comply with Section 310(b) of the Communications Act of 1934, as amended, and Section 22.4 of the Commission's Rules regarding alien ownership and control, then attach a statement describing applicant's ownership or control by aliens.
- (B) If the applicant or any party to this application has had any FCC station license or permit revoked or had any application for permit, license or renewal denied by the Commission, then attach an exhibit giving call sign of license or permit revoked and relate circumstances.
- (C) If any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacturing or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition, then attach a statement relating the facts.
- (D) If the applicant, or any party to this application, or any person directly or indirectly controlling the applicant has ever been convicted of a felony by any state or federal court, then attach a statement relating the facts.
- (E) If the applicant, or any person directly or indirectly controlling the applicant, is presently a party in any pending matter referred to in Instructions 20(C) and 20(D), then attach a statement relating the facts.

- (F) If there are any co-channel facilities within the mileage standards specified in Section 22.15(b)(1) of the Commission's Rules, then attach the interference studies required by Rule Section 22.15(b)(2).
- (G) If this application is for an extension of time to complete construction, then attach an exhibit demonstrating why failure to complete construction was beyond the applicant's control.

Referencing

21. You may incorporate by reference documents, exhibits, or other lengthy showings already on file with the Commission only if: the information previously filed is over one 8½" by 11" page in length, and all information therein is current and accurate in all significant respects; the reference states specifically where the previously filed information can be found (i.e., station call sign and application file number, title of proceeding, docket number and legal citations), including exhibit and page references. Questions on an application form that call for numbers, or which can be answered by a "yes" or "no" or other short answer must be answered as appropriate and must not be referenced to a previous filing. See Section 22.13(b) of the Rules.

Current Information

22. Information filed with the Commission must be kept current. The applicant should notify the Commission regarding any material change in the facts as they appear in the application. See Section 1.65 of the Commission's Rules.

Waivers

23. Requests for waivers must contain a statement of reasons sufficient to justify a waiver, under Section 22.119 of the Rules. A separate request, with the required showing must be made for each rule waiver desired, identifying the specific rule or policy for which the waiver is requested.

Paperwork Reduction and Privacy Act Notice

24. The solicitation of personal information requested in this form is authorized by the Communications Act of 1934, as amended. The Commission will use the information provided in this form to determine whether grant of this application is in the public interest. In reaching that determination, or for law enforcement purposes, it may become necessary to refer personal information contained in this form to another government agency. In addition, all information provided in this form will be available for public inspection. If information requested on the form is not provided, processing of the application may be delayed or the application may be returned without action pursuant to the Commission rules. Your response is required to obtain the requested authority.

Public reporting burden for this collection is estimated to average 8 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Federal Communications Commission, Office of Managing Director, Washington, D.C. 20554, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project (3060-0046), Washington, D.C. 20503.

The foregoing Notice is required by the Privacy Act of 1974, P.L. 93-597, December 31, 1974, 5 U.S.C. 552a(e)(3), and the Paperwork Reduction Act of 1980, P.L. 96-511, Section 3504(c)(3).

Approved by OMB **FCC 401** FEDERAL COMMUNICATIONS COMMISSION FCC Use Only WASHINGTON, D.C. 20554 ++++.+++ Expires dd/mm/yy Estimated Average Burden Hours Per Response: 8 Hrs. Application for Public Mobile Services Radio Station Authorization File Number Read instructions before completing form Schedule A Complete One Schedule A Per Application 1. Legal Name of Applicant Area Code and Telephone No. Assumed Name Used for Doing Business (if any) Mailing Street Address or P.O. Box City State Zip Code 2. Fee Data, Refer to 47 CFR 1.1105 or Common Carrier Services Fee Filing Guide for Information FCC Use Only (a) Fee Type Code (b) Fee Multiple (c) Fee Due for Fee Type Code in 2(a) (d) Total Amount Due 3. Name of Contact Representative (if other than applicant) Area Code and Telephone No. Firm or Company Name Mailing Street Address or P.O. Box State City Zip Code 4(a) If in reference to an existing station: (b) If amendment to pending application: (c) Date Filed: (d) If partial assignment: Call Sign _ File No. Call Sign 5. Number of separate sites requested in this application: 6. (a) Cellular Market No. (b) Channel Block 7. Radio Service _ 8. Type of Operation _ CD - Paging and Radiotelephone Service 1WP - One-way Paging CL - Cellular Radiotelephone Service 2WM - Two-way Mobile

CO - Offshore Radiotelephone Service

CG - Air-Ground Radiotelephone Service

CR - Rural Radiotelephone Service

9. Is this a "Finders" application?

PMP - Point to Multipoint

- Point to Point

TM - Trunked Mobile

PP